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(12) UK Patent Application (19) GB (11) 2 088 299 A

(21) Application No 8128328  
(22) Date of filing 18 Sep 1981  
(30) Priority data  
(31) 53530U  
(32) 22 Sep 1980  
(33) Italy (IT)  
(43) Application published  
9 Jun 1982

(51) INT CL<sup>3</sup>  
B60J 3/02  
(52) Domestic classification  
B7J 63

(56) Documents cited  
GB 1518018  
GB 1452220  
GB 1354485  
GB 654555

(58) Field of search  
B7J

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(54) Sun Visor for Motor Vehicles

(57) In an adjustable sun visor a cell  
plastics material support (20) is fixed  
to a rod (21) by a connection affording  
pivotal and axial sliding movement

relative to the rod which in turn is  
connected to the car body through a  
conventional swingable hinge  
assembly. The support (20) is linked to  
the rod (21), which has flats 24,  
through at least one pair of U-shaped  
leaf springs (23), which engage the  
rod in astride relationship therewith,  
thereby providing the required holding  
couple on the visor at least in the  
raised out-of-use position thereof,  
while allowing the visor to slide with  
respect to the rod (21) only in the  
tilted down in-use position.

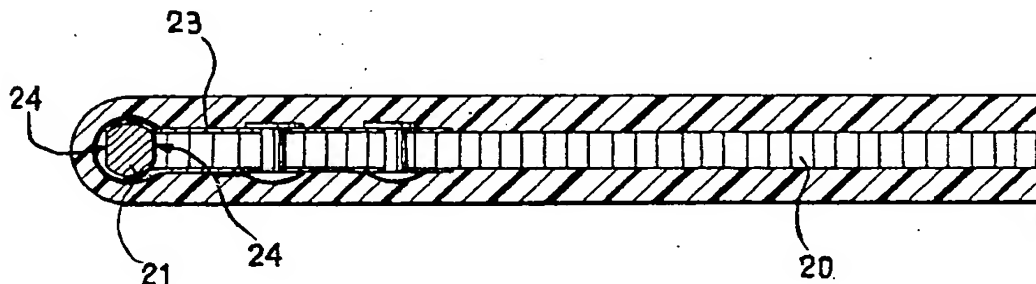


Fig. 4

GB 2 088 299 A

Fig. 1

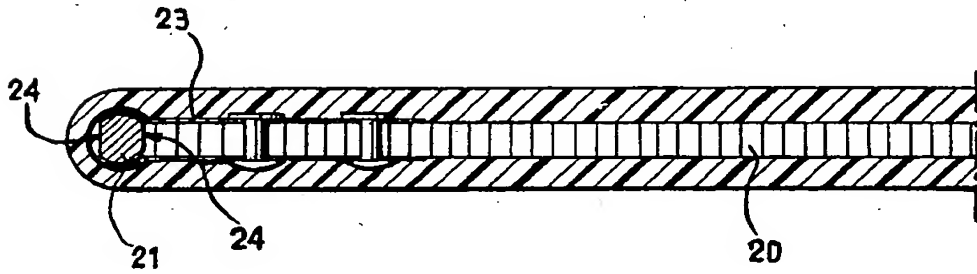
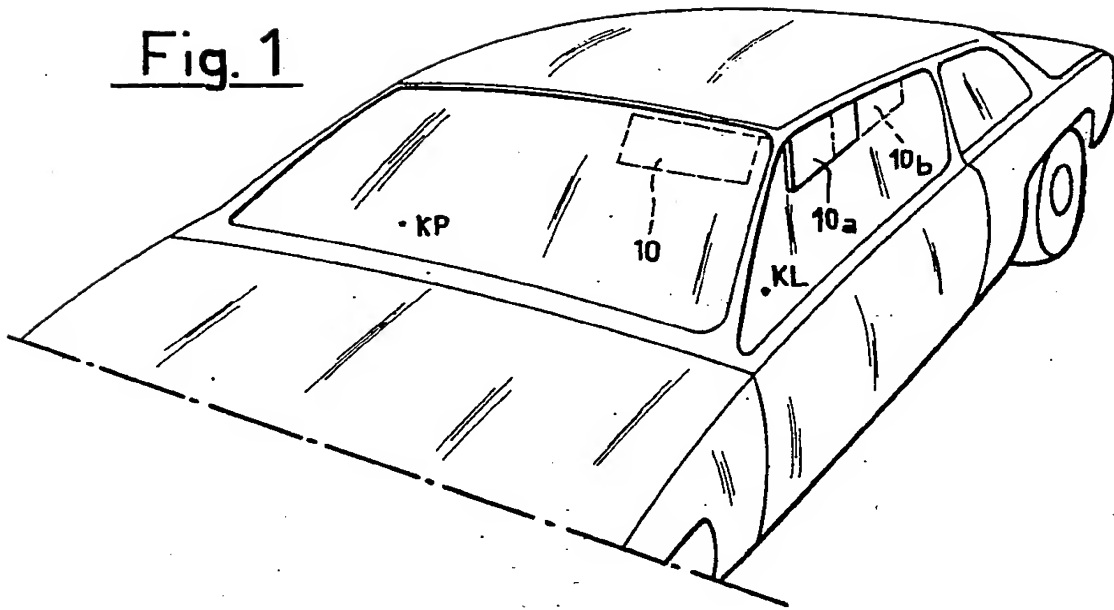


Fig. 4

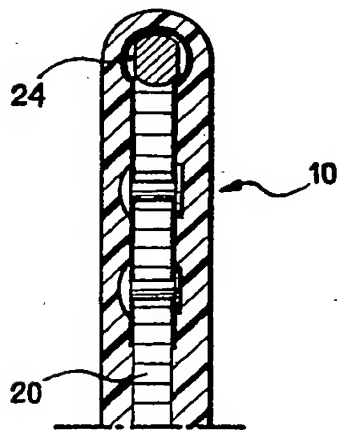


Fig. 3

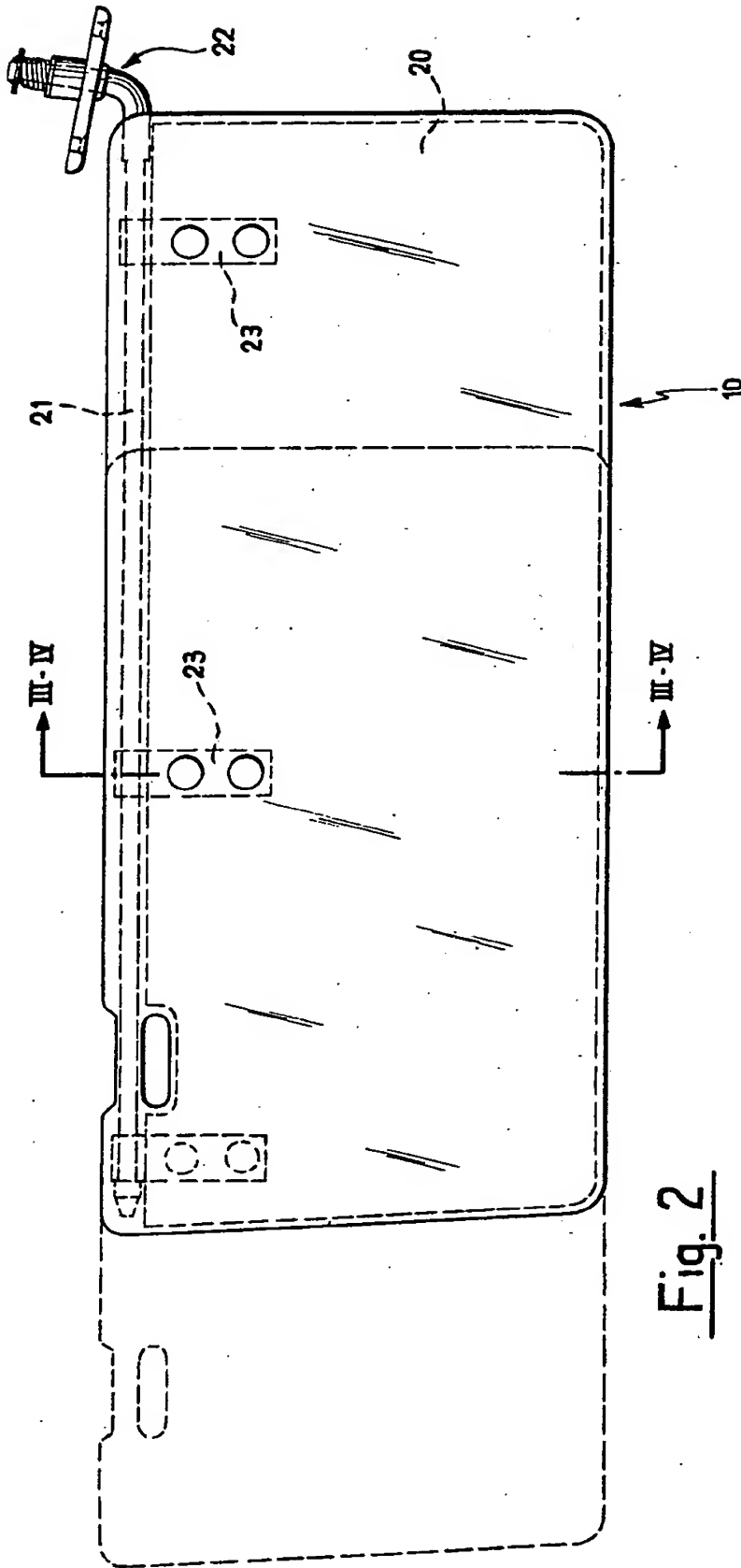


Fig. 2

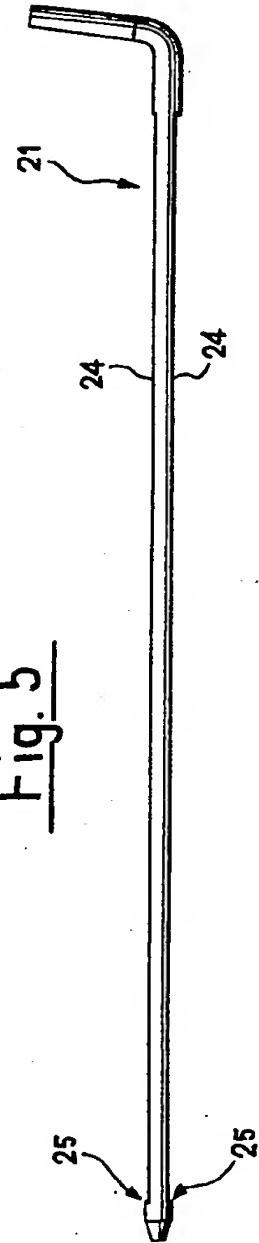


Fig. 5

## SPECIFICATION

## Sun Visor for Motorvehicles

This invention relates to a sun visor for motorvehicles, the visor being of the adjustable type, that is adapted to be tiltable from an out-of-use position to an in-use position, and pivotable to and from the vehicle side windows to intercept the sunlight impinging on said side windows.

Sun visors of the type indicated have a size which is proportioned to the width of the upper portion of the vehicle roof panel, and are located, in the out-of-use position, flat against the roof panel surface, substantially parallel to the lay of said panel surface.

In general, since two separately hinged visors are usually provided, the length of each visor is only marginally smaller than one half the width of the roof panel as measured along the top edge frame of the windshield.

For some types of passenger cars, that length dimension may be inadequate to screen the impinging light with the visor turned toward one side. Such is in fact the case with passenger cars having markedly tapering roof panels, high raked windshield uprights, and large side windows. In such instances, the visor can only screen off a small portion of the side window adjacent the windshield upright and is comparatively ineffective.

This invention sets out to obviate such drawbacks by providing a sun visor with side position adjustment capabilities, that is one which can be shifted from said area adjacent the windshield upright to intermediate areas of the side window.

According to the invention, it can be further arranged that this sun visor be simple to manufacture, highly convenient in use, and of low production cost.

According to one aspect of the present invention, there is provided a sun visor for motorvehicles, comprising a continuous load-bearing support formed from a cell type of plastics material and a trimmable suspension rod around which the sun visor is pivotable, and characterised in that said support is linked to said rod by means of at least one pair of leaf springs of U-like configuration, said springs being mounted astride said rod; and in that said rod, of cylindrical shape, is formed with sunk portions defining two continuous, diametrically opposite and parallel flat faces inscribed within the circle of the cylindrical cross-section, said flat faces—in the in-use position of the sun visor—extending parallel to the legs of said U-like springs, thereby attenuating the frictional contact between said springs and rod and allowing the sun visor to slide in a parallel direction to said rod, the sliding movement being inhibited, in the visor out-of-use position, by the increased contact surface and the elastic action between said springs and the cylindrical portions of said rod included between said sunk portions.

Thus, with the visor lowered and turned to the

side position of use, it can be moved along the rod parallel to its lay to reach the most appropriate position relatively to the motorvehicle passengers.

The invention will be more clearly understood by making reference to the following detailed description thereof in conjunction with the accompanying drawings, where:

Figure 1 is a fragmentary perspective view of a passenger car, illustrating the side position adjustment capabilities afforded by the sun visor of this invention;

Figure 2 is an elevation view showing in detail the visor in its two travel limit positions relatively to the support rod;

Figures 3 and 4 are cross-sectional views taken along the lines III—III and IV—IV respectively, of Figure 2; and

Figure 5 is a detail view of the rod.

In Figure 1, the reference numeral 10 designates the sun visor according to the invention, shown in dash lines, as occupying its in-use position to screen off sunlight impinging on the windshield KP, this same visor being indicated at 10a, and shown in full lines, in its in-use position to screen off sunlight impinging on the side window KL. In accordance with the invention, the side position of the visor can be adjusted by shifting the visor parallel to itself from the position 10a to a series of positions 10b as shown in dash and dot lines in the figure. This adjustment allows the visor to be moved in the most favourable position relatively to the vehicle passengers. This is achieved, according to the invention, in that the visor comprises a rigid support 20, advantageously formed from a cell type of plastics material as disclosed in prior British patent application No. 7934072 which is secured to a suspension and hinge connection rod 21 affording pivotal and axial sliding movement capabilities, the rod being connected to the car body through a conventional swingable hinge 22. The link between the support and rod is implemented such that the required retention couple is developed for the visor at least in the raised out-of-use position thereof, while allowing the visor to slide relatively to the rod only in the tilted down in-use position. To this end, the support is linked to the rod 21 through at least one pair of leaf springs 23 in the shape of an inverted "U", which engage the rod in astride relationship therewith. The rod, which is made cylindrical, is in turn provided with sunk portions defining two flat faces 24, which extend parallel to each other, are continuous, diametrically oppositely located, and inscribed within the circle of the rod cylindrical cross-section.

Said faces are so oriented as to be arranged, in the in-use position of the visor, parallel to the legs of the "U", and in the out-of-use position, perpendicular to said legs.

Figures 3 and 4 show the cited respective positions of the springs with respect to the rod and it may be seen that, with the visor in the out-of-use position (Figure 4), the rod cylindrical

portions which are included between the faces 24 are both in contact with the springs engaging said portions elastically and ensuring by frictional engagement the required tilt preventing couple. In that position, the springs inhibit, or at least effectively resist, the sliding movement of the visor axially along the rod. By contrast, in the tilted in-use position of the visor, the contact relationship between the springs and rod is broken at the faces 24 (Figure 3), and accordingly, the contact surface area is reduced, on one hand, and the elastic retention action of the springs on the rod is removed, on the other hand.

This enables a free translation movement of the visor relatively to the rod and the consequent side positioning of the visor as explained with reference to Figure 1.

It should be further noted that the faces 24 and springs 23 cooperate together in providing a snap-action tilting movement of the visor into its in-use and out-of-use positions. The axial sliding movement distance of the visor with respect to the rod is advantageously selected in the 0.3 to 0.5 times the largest dimension of the visor range, and is limited by abutment steps 25 formed at the ends of the faces 24 (Figure 5).

The load-bearing support 20 and the rod 21 will be covered in a known manner with a liner of a plastics material, with the interposition of a foamed material.

Of course, the effects of this invention also extend to cover other embodiments thereof which may afford the same degree of usefulness by employing this same inventive concept.

### 35 Claims

1. A sun visor for motorvehicles, comprising a continuous load-bearing support formed from a cell type of plastics material and a trimmable suspension rod around which the sun visor is

40 pivotable, and characterised in that said support is linked to said rod by means of at least one pair of leaf springs of U-like configuration, said springs being mounted astride said rod; and in that said rod, of cylindrical shape, is formed with sunk portions defining two continuous, diametrically opposite and parallel flat faces inscribed within the circle of the cylindrical cross-section, said flat faces—in-use position of the sun visor—extending parallel to the legs of said U-like springs, thereby attenuating the frictional contact between said springs and rod and allowing the sun visor to slide in a parallel direction to said rod, the sliding movement being inhibited, in the visor out-of-use position, by the increased contact surface and the elastic action between said springs and the cylindrical portions of said rod included between said sunk portions.

2. A sun visor according to Claim 1, characterised in that said continuous load-bearing support is formed from a cell type of plastics material.

3. A sun visor according to the preceding claims, characterised in that the faces formed by the sunk portions of said rod and the leaf springs cooperate together in also providing a snap-action tilting movement of the visor into the in-use and out-of-use positions thereof.

4. A sun visor according to the preceding claims, characterised in that the axial sliding movement distance of the visor relatively to the rod is selected in a range of values 0.3 to 0.5 times the largest dimension of the visor and is limited by abutment steps formed at one end of each said faces of the rod.

5. A sun visor according to the preceding claims, characterised in that said load-bearing support and rod are covered with a liner, with the optional interposition of a foamed material.